

CLAIMS

1. A valve assembly comprising:
a replacement valve;
and a collapsible and expandable anchoring structure;
said anchoring structure being dimensioned to extend longitudinally from an attachment location near the inflow annulus of a valve sinus to an attachment location within a sinus cavity, and
said anchoring structure further comprising a flared inflow rim, a flared outflow rim, and a plurality of support posts extending from said inflow rim to said outflow rim.
2. The valve assembly of claim 1, wherein said valve is positioned internally to said anchoring structure.
3. The valve assembly of claim 2, wherein said valve comprises an inflow annulus, an outflow annulus and a plurality of leaflets.
4. The valve assembly of claim 3, wherein said inflow annulus is scalloped.
5. The valve assembly of claim 1, wherein said support posts are configured to coincide longitudinally with the sinus commissural posts.
6. The valve assembly of claim 5, wherein said support posts extend beyond the outflow rim.
7. The valve assembly of claim 6, wherein said support posts deflect inwardly at backflow pressure.
8. The valve assembly of claim 7, wherein said support posts comprise tab attachment windows.
9. The valve assembly of claim 8, wherein said tab attachment windows are triangular.

10. The valve assembly of claim 1, wherein said flared outflow rim comprises a plurality of rings.
11. The valve assembly of claim 10, wherein said plurality of rings are configured in an undulating pattern.
12. The valve assembly of claim 11, wherein said plurality of rings are connected by a vertical element.
13. The valve assembly of claim 1, wherein said inflow rim comprises a plurality of rings.
14. The valve assembly of claim 13, wherein said plurality of rings are configured in an undulating pattern.
15. The valve assembly of claim 14, wherein said plurality of rings are substantially parallel to each other.
16. The valve assembly of claim 15, wherein said plurality of rings are connected by a vertical element.
17. The valve assembly of claim 1, wherein said inflow rim comprises barbs.